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US Department of Transportation Dockets
Docket No. FAA- 19996063
Room Plaza 401
400 Seventh Street SW,
Washington DC, 20590

Subject: Docket No. FAA-1 999-6063; Notice No. 99-1 6, "Revisions of Braking Systems Airworthiness Standards to Harmonize with European Airworthiness Standards for Transport Category Airplanes".

Reference: Federal Register notice dated 10 August 1999, Vol. 64, Pages 43569-43578

To the Docket:

Gulfstream Aerospace Corporation has **no comments** regarding the Notice of Proposed Rulemaking (NPRM), nor Advisory Circular (AC) 25.735-1X, "Brakes and Braking Systems Certification Tests and Analysis; Proposed Rule"

Gulfstream does have the following comments regarding proposed Technical Standard Order (TSO) - C 135, "Transport Airplane Wheels and Wheel and Brake Assemblies":

1. Page 7 of 25: **para.** 1.4.19, Brake Rated Retraction Pressure (BRP RET). On page 21 of 25, this term is called "return pressure". Return pressure is appropriate in this paragraph. A new definition could be added for return pressure.

2. We suggest that four additional definitions be added with regards to brake pressures:

>> Brake Rated Return Pressure (BRTNPMAX) - Maximum hydraulic system operating return pressure that the brake will be exposed to.

>> Brake Rated Contact Pressure (BRCPMIN) - Minimum hydraulic pressure that causes the piston to move to provide contact between the brake discs.

>> Brake Rated Contact Pressure (BRCPMAX) - Maximum hydraulic pressure that causes the piston to move to provide contact between the brake discs.

>> Brake Rated De-Spin Pressure (BRDPMIN) - Minimum hydraulic pressure provided to the brakes during gear retraction to stop the wheels from rotating.

These values are used to ensure that brakes are not grabby during taxi,
(BRCPMIN) > (BRTNPMAX)

and to ensure that brakes will be applied during the gear retraction de-spin function if applicable,
(BRDPMIN) > (BRCPMAX).

3. Page 19 of 25: **para. 3.3.4.1**, In the last sentence the term “near the fully worn” is used. We suggest that the term “near” is too open-ended. The value recommended should be provided. For example, is this a 90% worn brake test?
4. Page 20 of 25: **para. 3.4.1**, Most all of the other components of the hydraulic system have been Burst Pressure tested to 2.5 times the system operating pressure. A burst pressure test would be appropriate for the brake also. In a 3000 psi system, burst pressure is 7500 psi.
5. Page 21 of 25: **para. 3.4.2 & 3.4.4**, The term BRPRET should be BRTNPMAX.
6. Page 22 of 25: **para. 3.4.5.2**, The term BRPRET should be BRTNPMAX.

Very Truly Yours,

Richard L. Johnson
Chief Engineer & Acting Manager
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cc: GAMA